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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,227	09/29/2003	Hiromichi Watanabe	51274/DBP/A400	9869
23363	7590	03/24/2005	EXAMINER	
CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			HARRIS, ANTON B.	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,227

Applicant(s)

WATANABE ET AL

Examiner

Anton B. Harris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/675,227.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/29/03; 3/22/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Key (4,183,610 cited by Applicant).

Regarding claim 1, Key (col. 3, line 25- col.5 line 63) discloses a press-fit terminal comprising:

a pressure retaining part (col. 3, lines 37-39); and

an introducing part 12, wherein the pressure retaining part (col. 3, lines 37-39) generates an elastic force which becomes a holding force when the pressure retaining (col. 3, lines 37-39): part is press-fitted into the through- hole 14, 15, and the introducing part 12 generates an elastic force, the intensity of which is lower than that of the elastic force generated by the pressure retaining part (col. 3, lines 37-39).

Regarding claim 2, Key (col. 3, line 25- col.5 line 63) discloses an electronic equipment comprising:

a wiring board 16 having a through hole 14, 15; a press-fit terminal press-fitted into and held by the through-hole 14, 15, wherein the press-fit terminal 18 includes a pressure retaining part (col. 3, lines 37-39) and an introducing part 12,

the pressure retaining part (col. 3, lines 37-39) generates an elastic force which becomes a holding force when the pressure retaining part (col. 3, lines 37-39) is press-fitted into the through-hole, and

the introducing part 12 generates an elastic force, the intensity of which is lower than that of the elastic force generated by the pressure retaining part (col. 3, lines 37-39).

Regarding claim 3, Key (col. 3. line 25- col.5 line 63) discloses that said introducing part 12 is formed so that a diameter of the introducing part 12 is gradually reduced when it comes to an end portion (figure 1).

Regarding claim 4, Key (col. 3. line 25- col.5 line 63) discloses that said press-fit terminal 18 has an aperture (figure 1) extending in the axial direction of the terminal 18, and an elastic force is generated in said pressure retaining part (col. 3, lines 37-39) and the introducing part 12 when the press-fit terminal 18 is press-fitted.

Regarding claim 5, Key (col. 3. line 25- col.5 line 63) discloses that a cross-sectional area of said introducing part 12 is smaller than that of said pressure retaining (col. 3, lines 37-39) part.

Regarding claim 6, Key (col. 3. line 25- col.5 line 63) discloses that when an aperture (figure 1) of said introducing part 12 is formed being extended in the axial direction toward an end portion, the cross-sectional area of the introducing part is adjusted.

Regarding claim 7, Key (col. 3. line 25- col.5 line 63) discloses that a region of said aperture (figure 1) corresponding to the press-fitting retaining part (col. 3, lines 37-39) is formed small, and a region of the aperture (figure 1) corresponding to said introducing part 12 is formed large.

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Regarding claim 8, Key (col. 3. line 25- col.5 line 63) discloses that the region of said aperture (figure 1) corresponding to the is formed small so that a press-fitting retaining part (col. 3, lines 37-39) reduction in the elastic force of the press-fitting part (col. 3, lines 37-39), which is caused when the cross-sectional area of said introducing part 12 is decreased, can be made up.

Regarding claim 9, Key (col. 3. line 25- col.5 line 63) discloses that said wiring board 16 is composed of a laminated board.

Regarding claim 10, Key (col. 3. line 25- col.5 line 63) discloses that said wiring board 16 is composed of a laminated board on which a plurality of glass fiber sheets are multiply laminated, and printed wiring is provided on the surface.

Regarding claim 11, Key (col. 3. line 25- col.5 line 63) discloses a press-fit joining wiring board 16 made of a sheet-like base material, having a through-hole 14, 15 into which a press-fit terminal 18 is press-fitted so that it can be held, wherein an elastic material is contained in the resin for combining the sheet-like base material.

Regarding claim 12, Key (col. 3. line 25- col.5 line 63) discloses an electronic equipment comprising a wiring board 16 made of a sheet-like base material, having a through-hole 14, 15 into which a press-fit terminal 18 is press-fitted so that it can be held, wherein an elastic material is contained in the resin for combining the sheet-like base material.

Regarding claim 13, Key (col. 3. line 25- col.5 line 63) discloses that said elastic material is made of elastic particulates dispersed in the resin of the board 16.

Regarding claim 14, Key (col. 3. line 25- col.5 line 63) discloses that said elastic particulates are made of one of acrylic rubber, silicon rubber and nitrile butadiene rubber or the

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elastic particulates are made of a combination in which a plurality of the rubber materials are combined with each other (col. 5. lines 32-63).

Regarding claim 15, Key (col. 3. line 25- col.5 line 63) discloses that said elastic material is filled in a surface layer portion of the board 16.

Regarding claim 16, Key (col. 3. line 25- col.5 line 63) discloses that an inner circumferential face of said through-hole 14, 15 is made of metal, the hardness of which is higher than that of copper.

Conclusion


3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Knowles U.S. Patent No. 4,017,143 discloses a press-fit terminal having a wiring board and tapered retaining portions.

Kunkle et al. U.S. Patent No. 3,846,741 discloses a press-fit terminal having a wiring board, tapered retaining portions, and through-holes having metal on the inner surface.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anton B Harris whose telephone number is (571) 272-1976. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dean Reichard, can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


DEAN A. REICHARD 3/21/05
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800